REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application in view of the amendments and the remarks to follow. Claim 14 has been amended. Claims 1-29 are pending in this application.

The amendment to claim 14 addresses a minor informality noted during review. However, the amendment to claim 14 is not intended to alter the scope of the claims.

The amendment to the drawing corrects a minor informality noted during review. However, the amendment to the drawing introduces no new matter.

Prior Art:

Applicant notes that initialed copies of two information disclosure forms submitted on Jan. 7, 2004 (one itemizing U.S. Application No. 2001/0030648, listing Deering, and U.S. Patent No. 6,545,685, listing Dorbie; another itemizing Goodman and listing a portion of "Introduction to Fourier Optics, Spatial Filtering and Optical Information Processing"; copy of postcard acknowledging receipt by the USPTO enclosed) were apparently not included with the Office Action. Applicant is re-submitting these references and would greatly appreciate copies of appropriately-initialed and dated forms acknowledging such by return facsimile directed to **((509) 838-4324).**

Non-Statutory Double Patenting:

Claims 1-3, 5 and 11-20 stand provisionally rejected under the judicially-created doctrine of obviousness-type double patenting over claims 1-3, 7, 12, and 13 of co-pending and commonly-assigned U.S. Application No. 09/991,526 (Attorney Docket No. MS1-1032US). The Office Action states (pp. 2, 3) that, "Although the conflicting claims are not identical, they are not patentably distinct from each other because the applicant's claims have a one to one correspondence in limitations to the above claims found in Application No. 09/991,526."

Applicant notes that the double patenting rejection may be overcome by filing of a terminal disclaimer and that such is not required until such time as the Office renders an actual rejection in lieu of the present provisional rejection. Upon notification of such maturation of the rejection and/or notification of allowability of pending claims, coupled with appropriate acknowledgement of previously-submitted Information Disclosure Statements, Applicant will file a terminal disclaimer should Applicant continue to prosecute the instant application.

35 U.S.C. § 103

Claims 1-23 and 25-29 stand newly rejected, and 20-24 remain rejected, under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,580,430 to Hollis et al. (hereinafter "Hollis"). Applicant traverses and requests reconsideration.

Hollis is directed to a "Method and apparatus for providing improved fog effects in a graphics system" (Title). Hollis describes (Abstract): "A graphics system including a custom graphics and audio processor produces exciting 2D and 3D graphics and surround sound. The system includes a graphics and audio processor including a 3D graphics pipeline and an audio digital signal processor. Improved fog simulation is provided by enabling backwards exponential and backwards exponential squared fog density functions to be used in the fog calculation. Improved exponential and exponential squared fog density functions are also provided which provide the ability to program a fog start value. A range adjustment function is used to adjust fog based on the X position of the pixels being rendered, thereby preventing range error as the line of sight moves away from the Z axis. An exemplary Fog Calculation Unit, as well as exemplary fog control functions and fog related registers, are also disclosed."

Claims 1 and 5 each recite "A method ... comprising: measuring a travel distance through a gaseous object; converting the gaseous object distance to a color component; and blending the color component of the gaseous object with a color component of a non-gaseous object to produce a pixel in the visual scene", which is not taught, disclosed, suggested or motivated by Hollis.

The Office Action states (p. 5) that "Hollis does not disclose converting the gaseous object distance to a color component, but rather to a fog percentage based on travel distance. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to convert the gaseous object distance to a color component. One of ordinary skill in the art would have been motivated to do this in order to represent different atmospheric effects and more realistically simulates [sic] the effects of fog by using different combinations of fog colors and fog density values (see Hollis, col., 4, lines 20-21)."

First, the cited portion of Hollis is a sentence fragment. The sentence (col. 4, lines 19-21) is a portion of the Summary. To put this sentence fragment into context, Applicant is reproducing col. 3, line 53 through col. 4, line 36 below:

In contrast, in the virtual world of a computer graphics system, objects will all have the same clarity unless a mechanism is employed in the graphics system to simulate the effects of fog. Various solutions to this problem were offered. For example, many graphics systems have provided functions and techniques for incorporating atmospheric effects, such as fog, into a rendered scene in order to provide a more realistic view of the virtual world. For instance, the OpenGL graphics system, which provides a commonly used software interface to graphics hardware, enables a programmer to render atmospheric fog effects. OpenGL implements fogging by blending fog color with incoming fragments using a fog blending factor (f), as follows:

$C = fC_{in} + (1-f)C_{fog}$

This blending factor is computer using one of the following three equations:

Exponential (GL_EXP): $f = e^{-(density*z)}$ 1   1)

Exponential-squared (GL_EXP2): $f = e^{-(density*z)**2}$ 2)

Linear (GL_LINEAR): $f = (end-z)/(end-start)$ 3)

where z is the eye-coordinate distance between the viewpoint and the fragment center. The values for density, start and end are all specified the programmer using a particular function (i.e. glfog*( )).

Linear fog is frequently used to, for example, implement intensity depth-cuing in which objects closer to the viewer are drawn at a higher intensity. The effect of intensity as a function of distance is achieved by blending the incoming fragments with a black fog color. The exponential fog equation has some physical basis; it is the result of integrating a uniform attenuation between the object and the viewer. **The exponential function can be used to, for example, represent a number of atmospheric effects using different combinations of fog colors and fog density values.** By using fog, the obscured visibility of objects near the far plane can be exploited to overcome various problems such as drawing time overruns, level-of-detail transition, and database paging. However, in practice it has been found that the exponential function does not attenuate distant fragments rapidly enough. Thus, the exponential-squared fog was introduced in OpenGlL to provide a sharper fall-off in visibility. The Direct3D (DirectX) interface to graphics hardware also provides linear, exponential and exponential squared for density equations.

As explained above, various fog mechanisms have been employed in the past in order to make a 3D graphics image appear more natural and realistic. However, while significant work has been done in the past, further improvements in connection with fog simulation are desirable.

The present invention solves this problem by providing improved techniques and arrangements that further enhance the use of fog in graphics systems. The instant invention provides improved fog functions that enable new, interesting and visually enjoyable effects to be achieved in a graphics system. Additionally, the instant invention provides the ability to provide a horizontal range adjustment for the fog, thereby increasing the fog density towards the edges of the screen in order to make the effect more realistic. The invention further provides a method of sampling fog or screen space z for a normal quad and z blit is quad, when only one fog value is defined per quad. An exemplary fog calculation unit is also provided for implementing fog in accordance with the instant invention.

Hollis thus teaches that the exponential function is useful to "represent a number of atmospheric effects using different combinations of fog colors and fog density values." The Office Action cites Hollis as a reference representative of

one of skill in the relevant arts, yet Hollis does not teach, disclose, suggest or motivate the subject matter of claim 1, as admitted, on the record, in the Office Action by the statements and references contained in the Office Action.

Second, Hollis teaches that even the cited passage does not meet these needs, and instead teaches that (col. 4, line 27 et seq.) the exponential-squared function was introduced to overcome these deficiencies. Hollis further teaches (col. 4, line 34 et seq.) that yet further improvements are desirable. In fact, Hollis teaches (col. 4, line 37 et seq.) that the intended purposes of the disclosure of Hollis are to address exactly these issues, which Hollis characterizes as shortcomings of the art.

Third, the comments contained in the Office Action show that Hollis does not render the subject matter recited in claim 1 unpatentable. In other words, the Office Action fails to establish a prima facie case of obviousness. Put another way, Applicant notes that criteria for such are set forth in MPEP §2143, entitled "Basic Requirements of a Prima Facie Case of Obviousness" (see also MPEP §706.02(j)).

This MPEP section states that "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." No appropriate motivation or guidance has been identified in the references by the Office Action to modify or combine the reference disclosures.

This M PEP s ection a lso s tates t hat " Second, t here must b e a r easonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." As noted in the Office Action, Hollis fails to teach or suggest "converting the gaseous object distance to a color component", as recited in claims 1 and 5. As such, there can be no reasonable expectation of success.

This MPEP section further states that "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. C ir. 1991)." This requirement is also described in MPEP §2143.01, entitled "Suggestion or Motivation To Modify the References." This MPEP portion includes a subsection stating that "THE PRIOR ART MUST SUGGEST THE DESIRABILITY OF THE CLAIMED INVENTION".

Inasmuch as the prior art reference is silent with respect to the problem to be solved, it is inconceivable that the reference could suggest the desirability of the claimed subject matter. As a result, the rejection fails all prongs of the test set forth in the MPEP for a prima facie finding of unpatentability.

Fourth, because the reference fails to provide the elements of the claims, and also as there is no basis for the Examiner's contentions to modify the reference contained within the cited references, the only possible motivation for these contentions is hindsight reconstruction wherein the Examiner is utilizing Applicant's own disclosure to construct a reason for combining the cited references. The Examiner is reminded that hindsight reconstruction is not an appropriate basis for a §103 rejection. (*See, e.g., Interconnect Planning Corp. v.*

Feil, 227 USPQ 543, 551 (Fed. Cir. 1985); *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990) (explaining that hindsight reconstruction is an improper basis for rejection of a claim).)

Further, and fifth, such modification appears to employ an improper "obvious to try" standard for attempting to establish unpatentability. The impropriety of "obvious to try" as a standard for unpatentability is described in more detail below with reference to MPEP §2145(X)(B). This MPEP section states that:

> The admonition that 'obvious to try' is not the standard under §103 has been directed mainly at two kinds of error. In some cases, what would have been 'obvious to try' would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful.... In others, what was 'obvious to try' was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it. *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988) (citations omitted).

No indication as to which parameters are critical and no direction as to which of many possible choices is likely to be successful has been identified in the reference relied upon.

Claim 5 additionally recites "One or more computer-readable media comprising computer-executable instructions that, when executed, perform a method ...." The Office Action cites (p. 5) col. 6, line 47 of Hollis for the naked proposition that Hollis describes computer-readable media, with no attempt whatsoever to show that Hollis provides any teaching, disclosure, suggestion or

motivation for the medium as recited in Applicant's claim 5. The cited portion of Hollis is included in a paragraph extending from line 42 to line 52, which paragraph is reproduced here:

> In this example, main processor 110 (e.g., an enhanced IBM Power PC 750) receives inputs from handheld controllers 108 (and/or other input devices) via graphics and audio processor 114. Main processor 110 interactively responds to user inputs, and executes a video game or other program supplied, for example, by external storage media 62 via a mass storage access device 106 such as an optical disk drive. As one example, in the context of video game play, main processor 110 can perform collision detection and animation processing in addition to a variety of interactive and control functions.

Again, the Office Action appears to be employing an inappropriate "obvious to try" standard for finding unpatentability, where the reference provides no hint whatsoever to employ affirmatively-recites elements as set forth in Applicant's claim 5.

Claim 8 recites "A graphical display system for rendering a scene, comprising: a gaseous phenomena generator, configured to (i) determine a distance traveled through a gaseous phenomenon from a reference point based upon a v iewpoint o f a u ser; (ii) c onvert t he d istance t raveled t o a n a ttenuation factor; and a blending unit, configured to blend a pixel color absent gaseous phenomenon with a pixel color value of the gaseous phenomenon based on the attenuation factor, to render a final pixel color for a portion of the gaseous phenomenon", which is not taught, disclosed, suggested or motivated by Hollis.

The Office Action states (p. 6) that "Referring to claim 8, the remarks presented with respect to claim 1, above, apply equally to this claim." The subject matter represented by claim 8 is sufficiently different that Applicant finds this rejection to be incomprehensible. The Office Action also states (pp. 9, 10)

that "Regarding the [anticipation] rejection to claim 8 [over Hollis], in the last paragraph on page 31, the applicant appears to be arguing that claim 8 is allowable because claim 1 is allowable." That passage from the Response dated Jan. 27, 2004, is reproduced below:

> As noted above with respect to claim 1, Hollis does not teach or describe any gaseous phenomena generator or blending unit configured to "blend a pixel color absent gaseous phenomenon with a pixel color value of the gaseous phenomenon based on the attenuation factor, to render a final pixel color for a portion of the gaseous phenomenon", as recited in claim 8. The Office Action provides no basis (page 6) for rejection of claim 8 other than the rejection of claim 1. As such, the anticipation rejection of claim 8 is in error and should be withdrawn, and claim 8 should be allowed.

The present Office Action thus appears to be failing to provide a meaningful rejection of claim 8 because the prior Office Action failed to provide a meaningful basis for the rejection of claim 8. Neither Office Action shows where any teaching might be found in Hollis to show any gaseous phenomena generator or blending unit configured to "blend a pixel color absent gaseous phenomenon with a pixel color value of the gaseous phenomenon based on the attenuation factor, to render a final pixel color for a portion of the gaseous phenomenon", as recited in claim 8. Inasmuch as Hollis and the Office Actions are void of any disclosure of these affirmatively-recited elements of claim 8, the unpatentability rejection is prima facie defective and should be withdrawn, and claim 8 should be allowed.

In the event that the Examiner continues to find claim 8 to be non-allowable, clarification of the rejection, and establishment of some meaningful relationship between the teachings of a reference and the subject matter of claim 8, are respectfully requested.

Claim 14 recites "A method for rendering a graphical scene, comprising: determining a distance traveled through gaseous phenomena from a reference point based upon a viewpoint of a user; applying an attenuation factor to the gaseous phenomena based the distance to produce a gaseous phenomena pixel color; and blending the gaseous phenomena pixel color with a pixel color absent the gaseous phenomena, to produce a final gaseous phenomena color pixel", claim 17 recites "One or more computer-readable media comprising computer-executable instructions that, when executed, perform a method comprising: determining a distance traveled through gaseous phenomena from a reference point based upon a viewpoint of a user; applying an attenuation factor to the gaseous phenomena based the distance to produce a gaseous phenomena pixel color; and blending the gaseous phenomena pixel color with a pixel color absent the gaseous phenomena, to produce a final gaseous phenomena color pixel" and claim 18 recites "A method for rendering a scene that includes gaseous phenomena, the method comprising: determining a travel distance value through at least one fog object from a reference point to a pixel; converting the travel distance value to a fog factor value; and determining a pixel color value for the pixel based on the fog factor value, whereby the scene can be rendered using the determined pixel color", which recitations are not taught, disclosed, suggested or motivated by Hollis. The Office Action merely references claim 1 (or, in the case of claim 17, claim 5, which merely refers to claim 1) in rejecting such claims.

As previously noted, Hollis does not provide the elements recited in these claims. For example, Hollis does not teach or disclose "applying an attenuation factor to the gaseous phenomena based the distance to produce a gaseous

phenomena pixel color" as recited in claims 14, 17 and 18. For at least these reasons, the rejection of claims 14, 17 and 18 is in error and should be withdrawn, and claims 14, 17 and 18 should be allowed.

In the event that the Examiner continues to find claims 14, 17 and 18 to be non-allowable, clarification of the rejection, and establishment of some meaningful relationship between the teachings of a reference and the subject matter of claims 14, 17 and 18, are respectfully requested.

In contrast to Hollis, claim 20 recites that "determining a travel distance value comprises: initializing the pixel color value; determining a back distance value from the reference point to the back face of the fog object and adding the back distance value to a color buffer value; and determining a front distance value from the reference point to the front face of the fog object and subtracting the front distance value from the color buffer value, wherein the final color buffer value represents a scaled travel distance through the fog object", which is not taught, disclosed, suggested or motivated by Hollis.

The Office Action states (p. 7) that "Hollis discloses determining a travel distance between the front and back face of an object (fog) as shown in the rejection to claim 3 above, and the standard means for determining this distance would be to subtract the distance between the front and back points. Hollis does not disclose initializing the pixel color value, although it can be assumed that this value is at some point initialized during the calculation in Hollis."

The Office Action (and the prior Office Action) thus admits that Hollis does not provide the elements recited in claim 20, and in particular does not disclose "initializing the pixel color value". The Office Action also states (p. 10)

that "It is unnecessary to provide motivation for modifying a reference, when the limitation is inherent in the claim. In this case, if the pixel color value is not initialized at some point, it would serve no purpose to the invention. It is inherent that this must take place." Applicant disagrees and respectfully requests reconsideration.

Inherency relates to results or characteristics, and not to affirmatively-recited elements, as is explained in more detail below with reference to MPEP §2112, entitled "Requirements of Rejection Based on Inherency; Burden of Proof". In a subsection entitled "EXAMINER MUST PROVIDE RATIONALE OR EVIDENCE TENDING TO SHOW INHERENCY", this MPEP section states that:

> The fact that a certain **result or characteristic** may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted) (The claims were drawn to a disposable diaper having three fastening elements. The reference disclosed two fastening elements that could perform the same function as the three fastening elements in the claims. The court construed the claims to require three separate elements and held that the reference did not disclose a separate third fastening element, either expressly or inherently.).

This MPEP subsection further states that "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to

reasonably support the determination that the allegedly inherent **characteristic** necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)." Inherency thus may not be used to substitute for affirmatively-recited elements.

In algorithms where quantities are calculated and the results are then stored in a variable, the variable may not require initialization. In algorithms where an initial value of a variable is modified by a calculation, the variable may require initialization. As such, the argument offered in the Office Action, to the effect that "It is inherent that this must take place." is patently erroneous. As such, the rejection of claim 20 is prima facie defective and should be withdrawn, and claim 20 should be allowed.

In the event that the Examiner continues to find claim 20 to be non-allowable, clarification of the rejection, and establishment of some meaningful relationship between the teachings of a reference and the subject matter of claim 20, are respectfully requested.

Claim 25 recites "A computer usable storage medium having stored therein instructions configured to render images including gaseous phenomena having atmospheric effects by causing one or more processors to: determine a travel distance value through at least one fog object from a reference point to a pixel, wherein the fog object is bounded by a front face and a back face; convert the travel distance value to a fog factor value; and determine a pixel color value for the pixel based on the fog factor value, whereby the scene can be rendered using the determined p ixel color, w herein the instructions configured to render images having atmospheric effects by causing one or more processors to

determine a travel distance value comprise instructions configured to cause the one or more processors to: initialize the pixel color value; determine a back distance value from the reference point to the back face of the fog object and adding the back distance value to a color buffer value; and determine a front distance value from the reference point to the front face of the fog object and subtracting the front distance value from the color buffer value, wherein the final color buffer value represents a scaled travel distance through the fog object", which is not taught, disclosed, suggested or motivated by Hollis.

The Office Action merely states (p. 8) that "Referring to claim 25, the remarks presented with respect to claims 18, 19 and 20, above, apply equally to this claim." However, those claims do not include the bulk of the recitation of claim 25, which may be determined at a glance simply by noting differences in length of these claims. As such, the rejection fails to provide a meaningful basis for response.

Applicant notes that claim 25 includes recitation of numerous elements acknowledged in the Office Action with respect to other claims to be missing from Hollis. For example, claim 25 recites a computer usable storage medium having stored therein instruction to cause one or more processors to initialize the pixel color value. As noted above with respect to claim 5, there is no teaching, disclosure, suggestion or motivation in Hollis to employ a computer readable medium as recited in claim 25.

For further example, claim 25 recites that such medium includes instructions to initialize the pixel color value. As noted above with respect to

claim 20, the Office Action <u>acknowledges</u>, on the record, that no such teaching or disclosure is found in Hollis.

Dependent claims 2-4, 6, 7, 9-13, 15, 16, 19-24 and 26-29 distinguish by virtues of dependence from allowable claims and for their own recited features which are neither taught nor suggested by the cited references. For example, claims 2, 4, 21, 22, 26 and 27 recite use of linear equations or models for distance calculation, while claim 7 recites a constant density gas object. Claims 23 and 28 recite use of an exponential equation, while claims 24 and 29 recite use of an exponential-squared equation.

Hollis teaches (col. 4, line 12 et seq.; see esp. 32 et seq. and col. 5, line 21; col. 10, line 1 et seq.) that conventional linear fog modeling provides a situation where further improvements in fog simulation are desirable. Hollis thus teaches two fog density functions (see col. 4, lines 58 and 60) incorporating five different density models (col. 9, lines 64-66; col. 10, lines 8, 24, 26, 37 and 39 and associated text). Hollis thus teaches away from the recitation of claims 2, 4, 21, 22-24 and 26-29. It is improper to employ a reference in a manner that teaches away from the subject matter disclosed in the reference or renders that subject matter unsuitable for its intended purpose, as is explained below in more detail with reference to MPEP §2145(X)(D), entitled "References Teach Away from the Invention or Render Prior Art Unsatisfactory for Intended Purpose". This MPEP section states that:

> In addition to the material below, see MPEP § 2141.02 (prior art must be considered in its entirety, including disclosures that teach away from the claims) and MPEP § 2143.01 (proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference).

1. The Nature of the Teaching Is Highly Relevant

A prior art reference that "teaches away" from the claimed invention is a significant factor to be considered in determining obviousness; however, "the nature of the teaching is highly relevant and must be weighed in substance.

MPEP §2141.02, referenced above and entitled "Differences Between Prior Art and Claimed Invention", states that:

> Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language, and considering both the invention and the prior art references as a whole. See MPEP § 2111 - § 2116.01 for case law pertaining to claim interpretation.
>
> THE CLAIMED INVENTION AS A WHOLE MUST BE CONSIDERED
>
> In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983)

This MPEP section further states, in a subsection entitled "DISTILLING THE INVENTION DOWN TO A "GIST" OR "THRUST" OF AN INVENTION DISREGARDS "AS A WHOLE" REQUIREMENT", that: "Distilling an invention down to the "gist" or "thrust" of an invention disregards the requirement of analyzing the subject matter "as a whole." *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) ...."

In the instant application, disparate portions of the reference have been cited, out of context, as providing various elements and motivations "picked and chosen" from Applicant's disclosure and claims. Such is improper in attempting to establish unpatentability of pending claims.

Moreover, with respect to all of the unpatentability rejections, no <u>evidence</u> has been provided as to why it would be obvious to modify the teachings of the reference. Evidence of a suggestion to combine or modify may flow (i) from the prior art reference itself, (ii) from the knowledge of one skilled in the art or (iii) from the nature of the problem to be solved. However, this range of sources does not diminish the requirement for <u>actual evidence</u>. Further, the showing must be <u>clear and particular</u>. See *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999).

Accordingly, the rejections of claims 1-29 are in error and should be withdrawn, and claims 1-29 should be allowed.

Deficiencies in Examination

The Examiner's response to argument is deficient in multiple regards. A first deficiency is that the response to argument clearly fails to respond to Applicant's arguments with respect to the rejections under 35 U.S.C. §103, or, in the alternative, is an admission that these rejections are defective.

Applicant notes the requirements of MPEP §707.07, entitled "Completeness and Clarity of Examiner's Action". This MPEP section cites 37 CFR §1.104, entitled "Nature of examination" which in turn states, in subsection (b), entitled "Completeness of examiner's action" that "The examiner's action will be complete as to all matters, except that in appropriate circumstances, such as misjoinder of invention, fundamental defects in the application, and the like, the action of the examiner may be limited to such matters before further action is made."

This MPEP section further states, in subsection (f) thereof, entitled "Answer All Material Traversed", that "Where the requirements are traversed, or suspension thereof requested, the examiner should make proper reference thereto in his or her action on the amendment. Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it." and also states, under a heading labeled "Examiner Note" that "The examiner must address all arguments which have not already been responded to in the statement of the rejection." The Office Action clearly fails to comport with these requirements as set forth in the MPEP, at least because the Office Action both fails to address Applicant's arguments with respect to statutory subject matter and continues to reject claims

as being directed to non-statutory subject matter. Applicant has enumerated the various grounds of argument in this Response in order to facilitate meaningful dialectic and/or rebuttal.

Another deficiency is a complete failure to provide **any** meaningful grounds for the newly-provided rejection of claims 1-19 and 25-29. Clarification of the rejection and provision of a meaningful basis therefor are respectfully requested.
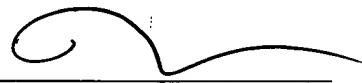
For at least these reasons, the Office Action fails to comport with appropriate standards for examination. The Examiner should either allow Applicant's claims or provide a meaningful basis for rejection and an appropriate response to Applicant's arguments.

Conclusion

Claims 1-29 are in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. Should any matter in this case remain unresolved, the undersigned attorney respectfully requests a telephone conference with the Examiner to resolve any such outstanding matter.

Respectfully Submitted,

Date: May 20, 2004

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